

REMARKS

Claims 1, 19, 36, 42, 53-55, 58, 62, 63, and 67 have been amended. Claims 12, 32, 33, 35 and 57 are canceled. Claims 72 and 73 are new. The application contains 54 total pending claims. Applicants acknowledge with gratitude the Examiner's allowance of claim 59.

35 U.S.C. §112, first paragraph

The Examiner rejected claims 12, 32, 33, 35, 36, 42, 57, 63 and 67 under 35 U.S.C. §112, first paragraph for failing to comply with the enablement requirement.

Claims 12, 32, 33, and 35 are hereby canceled without prejudice.

Regarding claim 36, it is noted that in the specification on page 36, lines 8-13, it is described that two filters are optionally used, one being a slow filter and one being a fast filter for tracking movement. The claim has been amended to add clarity by adopting language used in the specification for the "fast" and "slow" movement trackers.

Claim 42 has been amended for clarity, deleting the threshold element, and instead highlighting the transform functionality of the claimed device. Support for this amendment can be found on page 33, lines 2-7.

Claim 57 is canceled without prejudice.

Claim 63 has been amended to delete the objected to portions of the claim, namely "a current velocity of said object" and "current acceleration state of said object".

Applicant disagrees with the Examiner regarding the limitations of claim 67 which pertain to differences in the magnitude of the signal between individual sensors. As the Examiner indicated, in an embodiment of the invention, signals measured from each sensor are compared to an "ideal" value (the words used by the Examiner) and then stored in a database. While this is not *per se* storage of the difference in magnitude from one sensor to another, measurement of each sensor with respect to the same "ideal" value and storage of the difference from that ideal value is, in essence, storage of difference in signal magnitudes between the individual sensors. For example, if one sensor is recorded as being +3 from the ideal value and a second sensor is recorded as being -2 from the ideal value, it is clear the difference between the two sensors is 5.

In order to make the language of the claim more clear, "compensation" has been replaced by "calibration". Support for this change can be found on page 20, line 13.

35 U.S.C. §112, second paragraph

The Examiner rejected claims 19, 55 and 62 under 35 U.S.C. §112, second paragraph for failing to particularly point out and distinctly claim the subject matter which is deemed as the invention.

Claim 19 has been amended to provide "object" with proper antecedent basis.

Claim 55 has been amended to reinsert some material previously deleted from claim 54. This amendment should provide proper antecedent basis to the elements of claim 55.

Claim 62 has been amended to clarify that the "arrangement" refers to the excitation arrangement.

35 U.S.C. §102(b)

The Examiner rejected claims 1-6, 8, 13, 18, 20 and 53 under 35 U.S.C. §102(b) as being anticipated by US 5,854,881 to *Yoshida, et al.* ("the '881 patent"). In view of the amendments to claims 1 and 53, Applicant asserts that claims 1-6, 8, 13, 18, 20 and 53 are not anticipated by the '881 patent.

Applicant has amended claim 1 to indicate that the amplifier arrangement is "dedicated", and therefore does not switch between different amplifier connections as the devices of the '881 patent do (see Figs. 19, 22 and 32). Support for this amendment adding a "dedicated" amplifier arrangement can be seen in Figs. 5, 6 and 7 and on page 22, lines 8-12, *inter alia*, where it states that "each of the differential amplifiers 60.1..60.n is preferably connected via each of its differential inputs to a different one of the sensors of the grid."

It should be understood by the Examiner that the operational principles of the '881 patented devices and the present invention are markedly different. The '881 patent describes devices which switch connections from sensor electrodes sequentially to a differential amplifier in order to determine on which sensor the pointing device (e.g. stylus) is located. In contrast, the present invention uses measurements from more than

one sensor simultaneously, and in order to determine on which sensor the pointing device is located on, an analysis of the phase of the signal measured at the output of the differential amplifier is performed. See page 23, line 15 to page 24, line 5 of the application as filed. If the '881 devices were to use a dedicated amplifier arrangement, such as described in the present invention, it would be impossible (without redesigning the '881 devices) to determine which side of the amplifier's inputs is the origin of the amplifier's output and therefore it would be impossible to determine on which sensor the stylus is placed, thus rendering the '881 devices unfit for their intended purpose.

Therefore, it is believed that because the present invention uses a dedicated (*i.e.* not switching) differential amplifier arrangement, claims 1-6, 8, 13, 18, 20 and 53 are not anticipated by the '881 patent.

35 U.S.C. §103(a)

The Examiner rejected claims 7 and 9-11 under 35 U.S.C. §103(a) as being obvious in view of the '881 patent. In view of the above discussion regarding the differences between the differential amplifier arrangements used by the '881 patent and the present invention, Applicants submit that there is no suggestion or motivation to combine the '881 patent with a dedicated differential amplifier arrangement and knowledge of those skilled in the art to create the inventions of claims 7 and 9-11. Therefore, Applicants assert that claims 7 and 9-11, which include the limitation of a dedicated differential amplifier arrangement, are not obvious in view of the '881 patent for at least the reasons discussed above.

The Examiner rejected claims 22-27, 38-41, 54, 58, 60, 61 and 69-71 under 35 U.S.C. §103(a) as being obvious over the '881 patent in view of WO 02/01791 to *Weiner, et al.* ("the 791 publication"). In view of the amendments to claims 1, 54 and 58, which clarify that a dedicated differential amplifier arrangement is used in the present invention, claims 22-27 and 38-41, 54, 58 and 69-71 are neither anticipated nor obvious in view of the '881 patent in view of the '791 publication.

Although Applicants believe that claim 22 is both novel and non-obvious in view of the amendment to claim 1, it should be noted that claim 22 is itself non-obvious over a combination of the '881 patent in view of the '791 publication. One of the limitations of

claim 22 adds an excitation arrangement to the digitizer device of claim 1. The Examiner has stated that it would be obvious to combine the excitation arrangement of the '791 publication with the device '881 patent to make the invention of this claim. However, the '881 patent specifically states that its object is to provide "a coordinate input function without making alterations in an LCD panel which has been conventionally used specially for image display..." See Col. 9, lines 35-40, *inter alia*. In other words, adding an excitation arrangement about the LCD screen would run counter to the objective of the '881 patent, which is essentially to use an off-the-shelf LCD structure. Therefore, it would not be obvious to combine the excitation arrangement of the '791 publication with the '881 devices since there is no suggestion or motivation to do so and, in fact, the '881 patent teaches away from such a combination.

Regarding claims 60 and 61, it is noted that these claims include a passive stylus which would typically be excited by an excitation arrangement. As described above with respect to claim 22, the '881 does not use an excitation arrangement and actually teaches away from adding one to the display. Therefore, the combination of the '881 patent and the '791 publication in order to provide a device which functions with a passive stylus is not obvious.

The Examiner rejected claim 29 under 35 U.S.C. §103(a) as being obvious over the '881 patent in view of US 4,788,386 to *Matthews, et al.* ("the '386 patent") and claims 31 and 34 under 35 U.S.C. §103(a) as being obvious over the '881 patent in view of US 4,817,034 to *Hardin Sr., et al.* ("the '034 patent"). In view of the amendment to claim 1, Applicants believe that the combinations of the '881 patent and the '386 patent and the '881 patent and the '034 patent fail to teach all the limitations of claims 29, 31 and 34. Therefore, the combinations of these references do not render claims 29, 31 and 34 obvious.

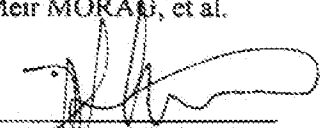
New Claims

New claim 72 is a combination of claim 1 and claim 14. Applicants note for the Examiner that claim 14 was previously objected to by the Examiner but was indicated as being allowable if incorporated into claim 1. This claim should be allowable, regardless of any of the remarks or the amendments discussed above.

New claim 73 has been added to further define a feature of an exemplary embodiment of the invention, which is that the sensors of the transparent digitizer are sensed simultaneously rather than in sequence, for example as performed in the '881 patent.

In light of the above remarks and amendments, it is believed by the Applicants that the application is in a condition for allowance. Notice to this effect is respectfully requested.

Respectfully submitted,
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